Release notes for ENDF/B Development n-068_Er_164 evaluation

April 26, 2017

- **checkr** Warnings:

  1. A previous error halted parsing of the current section
     MAT=6831, MF= 1, MT=451 (1): Parsing stopped

     ```
     ERROR(S) FOUND IN MAT=6831, MF= 1, MT=451
         SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER     135 TO     243
     ```

- **checkr** Errors:

  1. A variable is outside the allowed ENDF range
     MAT=6831, MF= 1, MT=451 (0): Variable range

     ```
     ERROR(S) FOUND IN MAT=6831, MF= 1, MT=451
         MOD =    1 OUT OF RANGE    0 -    0          RECORD NUMBER     135
     ```

  2. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF= 2, MT=151 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=6831, MF= 2, MT=151
         SECTION  2/151 NOT IN DIRECTORY              RECORD NUMBER     245
     ```

  3. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF= 3, MT= 1 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=6831, MF= 3, MT=  1
         SECTION  3/  1 NOT IN DIRECTORY              RECORD NUMBER     271
     ```

  4. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF= 3, MT= 2 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=6831, MF= 3, MT=  2
         SECTION  3/  2 NOT IN DIRECTORY              RECORD NUMBER     302
     ```

  5. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF= 3, MT= 4 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=6831, MF= 3, MT=  4
         SECTION  3/  4 NOT IN DIRECTORY              RECORD NUMBER     333
     ```

  6. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF= 3, MT= 16 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 16
         SECTION  3/ 16 NOT IN DIRECTORY              RECORD NUMBER     353
     ```

  7. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF= 3, MT= 17 (0): Directory (b)

1

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 17
            SECTION  3/ 17 NOT IN DIRECTORY                RECORD NUMBER     362
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=6831, MF= 3, MT= 22 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 22
            SECTION  3/ 22 NOT IN DIRECTORY                RECORD NUMBER     368
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=6831, MF= 3, MT= 28 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 28
            SECTION  3/ 28 NOT IN DIRECTORY                RECORD NUMBER     379
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 51 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 51
            SECTION  3/ 51 NOT IN DIRECTORY                RECORD NUMBER     388
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 52 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 52
            SECTION  3/ 52 NOT IN DIRECTORY                RECORD NUMBER     403
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 53 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 53
            SECTION  3/ 53 NOT IN DIRECTORY                RECORD NUMBER     417
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 54 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 54
            SECTION  3/ 54 NOT IN DIRECTORY                RECORD NUMBER     430
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 55 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 55
            SECTION  3/ 55 NOT IN DIRECTORY                RECORD NUMBER     443
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 56 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 56
          SECTION  3/ 56 NOT IN DIRECTORY                RECORD NUMBER     456
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 57 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 57
          SECTION  3/ 57 NOT IN DIRECTORY                RECORD NUMBER     469
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 58 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 58
          SECTION  3/ 58 NOT IN DIRECTORY                RECORD NUMBER     482
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 59 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 59
          SECTION  3/ 59 NOT IN DIRECTORY                RECORD NUMBER     494
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 60 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 60
          SECTION  3/ 60 NOT IN DIRECTORY                RECORD NUMBER     506
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 61 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 61
          SECTION  3/ 61 NOT IN DIRECTORY                RECORD NUMBER     518
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 62 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 62
          SECTION  3/ 62 NOT IN DIRECTORY                RECORD NUMBER     530
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 63 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 63
          SECTION  3/ 63 NOT IN DIRECTORY                RECORD NUMBER     542
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 64 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 64
         SECTION  3/ 64 NOT IN DIRECTORY              RECORD NUMBER    554
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 65 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 65
         SECTION  3/ 65 NOT IN DIRECTORY              RECORD NUMBER    566
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 66 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 66
         SECTION  3/ 66 NOT IN DIRECTORY              RECORD NUMBER    578
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 3, MT= 91
         SECTION  3/ 91 NOT IN DIRECTORY              RECORD NUMBER    590
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT=102 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 3, MT=102
         SECTION  3/102 NOT IN DIRECTORY              RECORD NUMBER    602
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT=103 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 3, MT=103
         SECTION  3/103 NOT IN DIRECTORY              RECORD NUMBER    624
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT=104 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 3, MT=104
         SECTION  3/104 NOT IN DIRECTORY              RECORD NUMBER    636
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT=105 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 3, MT=105
         SECTION  3/105 NOT IN DIRECTORY              RECORD NUMBER    646
```

31. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 3, MT=107 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 3, MT=107
         SECTION  3/107 NOT IN DIRECTORY                   RECORD NUMBER    655
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 2 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 4, MT=  2
         SECTION  4/  2 NOT IN DIRECTORY                   RECORD NUMBER    670
```

33. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 16 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 16
         SECTION  4/ 16 NOT IN DIRECTORY                   RECORD NUMBER    864
```

34. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 17 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 17
         SECTION  4/ 17 NOT IN DIRECTORY                   RECORD NUMBER    867
```

35. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 22 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 22
         SECTION  4/ 22 NOT IN DIRECTORY                   RECORD NUMBER    870
```

36. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 28
         SECTION  4/ 28 NOT IN DIRECTORY                   RECORD NUMBER    873
```

37. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 51 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 51
         SECTION  4/ 51 NOT IN DIRECTORY                   RECORD NUMBER    876
```

38. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 52 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 52
         SECTION  4/ 52 NOT IN DIRECTORY                   RECORD NUMBER   1137
```

39. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 53 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 53
   SECTION  4/ 53 NOT IN DIRECTORY              RECORD NUMBER    1299
```

40. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 54 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 54
   SECTION  4/ 54 NOT IN DIRECTORY              RECORD NUMBER    1454
```

41. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 55 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 55
   SECTION  4/ 55 NOT IN DIRECTORY              RECORD NUMBER    1601
```

42. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 56 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 56
   SECTION  4/ 56 NOT IN DIRECTORY              RECORD NUMBER    1745
```

43. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 57 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 57
   SECTION  4/ 57 NOT IN DIRECTORY              RECORD NUMBER    1882
```

44. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 58 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 58
   SECTION  4/ 58 NOT IN DIRECTORY              RECORD NUMBER    2015
```

45. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 59 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 59
   SECTION  4/ 59 NOT IN DIRECTORY              RECORD NUMBER    2140
```

46. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 60 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 60
   SECTION  4/ 60 NOT IN DIRECTORY              RECORD NUMBER    2261
```

47. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 61 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 61
          SECTION  4/ 61 NOT IN DIRECTORY                RECORD NUMBER    2379
```

48. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 62 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 62
          SECTION  4/ 62 NOT IN DIRECTORY                RECORD NUMBER    2495
```

49. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 63 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 63
          SECTION  4/ 63 NOT IN DIRECTORY                RECORD NUMBER    2605
```

50. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 64 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 64
          SECTION  4/ 64 NOT IN DIRECTORY                RECORD NUMBER    2715
```

51. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 65 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 65
          SECTION  4/ 65 NOT IN DIRECTORY                RECORD NUMBER    2821
```

52. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 66 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 66
          SECTION  4/ 66 NOT IN DIRECTORY                RECORD NUMBER    2927
```

53. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 4, MT= 91 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=6831, MF= 4, MT= 91
          SECTION  4/ 91 NOT IN DIRECTORY                RECORD NUMBER    3031
```

54. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 5, MT= 16 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=6831, MF= 5, MT= 16
          SECTION  5/ 16 NOT IN DIRECTORY                RECORD NUMBER    3126
```

55. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 5, MT= 17 (0): Directory (b)

7

```
        ERROR(S) FOUND IN MAT=6831, MF= 5, MT= 17
          SECTION  5/ 17 NOT IN DIRECTORY                RECORD NUMBER    3411
```

56. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 5, MT= 22 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 5, MT= 22
          SECTION  5/ 22 NOT IN DIRECTORY                RECORD NUMBER    3526
```

57. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 5, MT= 28 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 5, MT= 28
          SECTION  5/ 28 NOT IN DIRECTORY                RECORD NUMBER    3957
```

58. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF= 5, MT= 91 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF= 5, MT= 91
          SECTION  5/ 91 NOT IN DIRECTORY                RECORD NUMBER    4250
```

59. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=12, MT= 16 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=12, MT= 16
          SECTION 12/ 16 NOT IN DIRECTORY                RECORD NUMBER    4776
```

60. Missing a gamma spectrum for continuum of gammas
    MAT=6831, MF=12, MT= 16 (1): No gamma spectrum

```
        ERROR(S) FOUND IN MAT=6831, MF=12, MT= 16
          CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

61. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=12, MT= 17 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=12, MT= 17
          SECTION 12/ 17 NOT IN DIRECTORY                RECORD NUMBER    4785
```

62. Missing a gamma spectrum for continuum of gammas
    MAT=6831, MF=12, MT= 17 (1): No gamma spectrum

```
        ERROR(S) FOUND IN MAT=6831, MF=12, MT= 17
          CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

63. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=12, MT= 51 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=12, MT= 51
          SECTION 12/ 51 NOT IN DIRECTORY                RECORD NUMBER    4792
```

8

64. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 52 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 52
       SECTION 12/ 52 NOT IN DIRECTORY                  RECORD NUMBER    4796
```

65. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 53 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 53
       SECTION 12/ 53 NOT IN DIRECTORY                  RECORD NUMBER    4800
```

66. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 54 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 54
       SECTION 12/ 54 NOT IN DIRECTORY                  RECORD NUMBER    4804
```

67. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 55 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 55
       SECTION 12/ 55 NOT IN DIRECTORY                  RECORD NUMBER    4808
```

68. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 56 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 56
       SECTION 12/ 56 NOT IN DIRECTORY                  RECORD NUMBER    4812
```

69. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 57 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 57
       SECTION 12/ 57 NOT IN DIRECTORY                  RECORD NUMBER    4816
```

70. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 58 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 58
       SECTION 12/ 58 NOT IN DIRECTORY                  RECORD NUMBER    4820
```

71. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 59 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 59
       SECTION 12/ 59 NOT IN DIRECTORY                  RECORD NUMBER    4824
```

72. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 60 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 60
       SECTION 12/ 60 NOT IN DIRECTORY              RECORD NUMBER    4828
```

73. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 61 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 61
       SECTION 12/ 61 NOT IN DIRECTORY              RECORD NUMBER    4833
```

74. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 62 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 62
       SECTION 12/ 62 NOT IN DIRECTORY              RECORD NUMBER    4837
```

75. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 63 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 63
       SECTION 12/ 63 NOT IN DIRECTORY              RECORD NUMBER    4841
```

76. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 64 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 64
       SECTION 12/ 64 NOT IN DIRECTORY              RECORD NUMBER    4845
```

77. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 65 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 65
       SECTION 12/ 65 NOT IN DIRECTORY              RECORD NUMBER    4849
```

78. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 66 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 66
       SECTION 12/ 66 NOT IN DIRECTORY              RECORD NUMBER    4853
```

79. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT= 91 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 91
       SECTION 12/ 91 NOT IN DIRECTORY              RECORD NUMBER    4857
```

10

80. Missing a gamma spectrum for continuum of gammas
MAT=6831, MF=12, MT= 91 (1): No gamma spectrum

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT= 91
       CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

81. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT=102 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT=102
       SECTION 12/102 NOT IN DIRECTORY              RECORD NUMBER    4868
```

82. Missing a gamma spectrum for continuum of gammas
MAT=6831, MF=12, MT=102 (1): No gamma spectrum

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT=102
       CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

83. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT=103 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT=103
       SECTION 12/103 NOT IN DIRECTORY              RECORD NUMBER    4882
```

84. Missing a gamma spectrum for continuum of gammas
MAT=6831, MF=12, MT=103 (1): No gamma spectrum

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT=103
       CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

85. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=12, MT=107 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT=107
       SECTION 12/107 NOT IN DIRECTORY              RECORD NUMBER    4893
```

86. Missing a gamma spectrum for continuum of gammas
MAT=6831, MF=12, MT=107 (1): No gamma spectrum

```
    ERROR(S) FOUND IN MAT=6831, MF=12, MT=107
       CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

87. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=14, MT= 16 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=6831, MF=14, MT= 16
       SECTION 14/ 16 NOT IN DIRECTORY              RECORD NUMBER    4907
```

88. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=14, MT= 17 (0): Directory (b)

11

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT= 17
            SECTION 14/ 17 NOT IN DIRECTORY                    RECORD NUMBER    4909
```

89. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 51 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT= 51
            SECTION 14/ 51 NOT IN DIRECTORY                    RECORD NUMBER    4911
```

90. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 52 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT= 52
            SECTION 14/ 52 NOT IN DIRECTORY                    RECORD NUMBER    4913
```

91. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 53 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT= 53
            SECTION 14/ 53 NOT IN DIRECTORY                    RECORD NUMBER    4915
```

92. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 54 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT= 54
            SECTION 14/ 54 NOT IN DIRECTORY                    RECORD NUMBER    4917
```

93. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 55 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT= 55
            SECTION 14/ 55 NOT IN DIRECTORY                    RECORD NUMBER    4919
```

94. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 56 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT= 56
            SECTION 14/ 56 NOT IN DIRECTORY                    RECORD NUMBER    4921
```

95. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 57 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT= 57
            SECTION 14/ 57 NOT IN DIRECTORY                    RECORD NUMBER    4923
```

96. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 58 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF=14, MT= 58
     SECTION 14/ 58 NOT IN DIRECTORY                RECORD NUMBER    4925
```

97. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 59 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF=14, MT= 59
     SECTION 14/ 59 NOT IN DIRECTORY                RECORD NUMBER    4927
```

98. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 60 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF=14, MT= 60
     SECTION 14/ 60 NOT IN DIRECTORY                RECORD NUMBER    4929
```

99. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 61 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF=14, MT= 61
     SECTION 14/ 61 NOT IN DIRECTORY                RECORD NUMBER    4931
```

100. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 62 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF=14, MT= 62
     SECTION 14/ 62 NOT IN DIRECTORY                RECORD NUMBER    4933
```

101. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 63 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF=14, MT= 63
     SECTION 14/ 63 NOT IN DIRECTORY                RECORD NUMBER    4935
```

102. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 64 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF=14, MT= 64
     SECTION 14/ 64 NOT IN DIRECTORY                RECORD NUMBER    4937
```

103. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 65 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=6831, MF=14, MT= 65
     SECTION 14/ 65 NOT IN DIRECTORY                RECORD NUMBER    4939
```

104. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=6831, MF=14, MT= 66 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT= 66
          SECTION 14/ 66 NOT IN DIRECTORY                 RECORD NUMBER    4941
```

105. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF=14, MT= 91 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT= 91
          SECTION 14/ 91 NOT IN DIRECTORY                 RECORD NUMBER    4943
```

106. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF=14, MT=102 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT=102
          SECTION 14/102 NOT IN DIRECTORY                 RECORD NUMBER    4945
```

107. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF=14, MT=103 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT=103
          SECTION 14/103 NOT IN DIRECTORY                 RECORD NUMBER    4947
```

108. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF=14, MT=107 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=14, MT=107
          SECTION 14/107 NOT IN DIRECTORY                 RECORD NUMBER    4949
```

109. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF=15, MT= 16 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=15, MT= 16
          SECTION 15/ 16 NOT IN DIRECTORY                 RECORD NUMBER    4952
```

110. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF=15, MT= 17 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=15, MT= 17
          SECTION 15/ 17 NOT IN DIRECTORY                 RECORD NUMBER    5058
```

111. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF=15, MT= 91 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=6831, MF=15, MT= 91
          SECTION 15/ 91 NOT IN DIRECTORY                 RECORD NUMBER    5091
```

112. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=6831, MF=15, MT=102 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF=15, MT=102
          SECTION 15/102 NOT IN DIRECTORY                  RECORD NUMBER    5377
```

113. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=15, MT=103 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF=15, MT=103
          SECTION 15/103 NOT IN DIRECTORY                  RECORD NUMBER    5926
```

114. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=6831, MF=15, MT=107 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=6831, MF=15, MT=107
          SECTION 15/107 NOT IN DIRECTORY                  RECORD NUMBER    6171
```

- **groupie** Errors:

    1. Very small elastic cross section found
    0: Small elastic

    ```
    Multi-Group and Multi-Band Parameters from ENDF/B Data (GROUPIE 2015-2)
    -----------------------------------------------------------------------
    ENDF/B Input and Output Data Filenames
    ENDFB.IN
    ENDFB.OUT
    ... [97 more lines]
    ```

- **fudge-4.0** Warnings:

    1. Missing a channel with a particular angular momenta combination
    resonances / resolved / MultiLevel_BreitWigner (Error # 0): missingResonanceChannel

    ```
    WARNING: Missing a channel with angular momenta combination L = 0, J = 1.5 and S = 1.5 for "capture"
    ```

    2. Potential scattering hasn't converted, you need more L's!
    resonances / resolved (Error # 1): potentialScatteringNotConverged

    ```
    WARNING: Potential scattering hasn't converged by L=0 at E=800.0 eV, xs[0]/xs[0]=100.0% > 0.1%
    ```

- **fudge-4.0** Errors:

    1. Calculated and tabulated Q values disagree.
    reaction label 18: n[multiplicity:'2'] + Er163 + gamma (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: -8818355.180419922 eV vs -8846370. eV!
    ```

    2. Calculated and tabulated Q values disagree.
    reaction label 19: n[multiplicity:'3'] + Er162 + gamma (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: -15721127.30032349 eV vs -1.57477e7 eV!
    ```

    3. Calculated and tabulated Q values disagree.
    reaction label 20: n + H1 + Ho163 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -6826141.224700928 eV vs -6854030. eV!
```

4. Calculated and tabulated Q values disagree.
   reaction label 21: Er165 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 6678517.704467773 eV vs 6.6497e6 eV!
```

5. Calculated and tabulated Q values disagree.
   reaction label 22: n + He4 + Dy160 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 1332036.329315186 eV vs 1306910. eV!
```

6. Calculated and tabulated Q values disagree.
   reaction label 23: H1 + (Ho164_s ->Ho164 + gamma) (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -151695.9940795898 eV vs -230661. eV!
```

7. Calculated and tabulated Q values disagree.
   reaction label 24: H2 + Ho163_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -4601575.123779297 eV vs -4629460. eV!
```

8. Calculated and tabulated Q values disagree.
   reaction label 25: H3 + Ho162_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -6752488.791473389 eV vs -6778720. eV!
```

9. Calculated and tabulated Q values disagree.
   reaction label 26: He4 + (Dy161_s ->Dy161 + gamma) (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7786422.611785889 eV vs 7760280. eV!
```

- `njoy2012` Warnings:

  1. Evaluation has no unresolved resonance parameters given
     unresr...calculation of unresolved resonance cross sections (0): No URR

     ```
      ---message from unresr---mat 6831 has no unresolved parameters
                               copy as is to nout
     ```

  2. Evaluation has no unresolved resonance parameters given
     purr...probabalistic unresolved calculation (0): No URR

     ```
      ---message from purr---mat 6831 has no unresolved parameters
                             copy as is to nout
     ```

  3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

     ```
      ---message from conver---cannot do complete particle production for mt= 16
                               only mf4/mf5 provided
     ```

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

   ```
      ---message from conver---cannot do complete particle production for mt= 17
                        only mf4/mf5 provided
   ```

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

   ```
      ---message from conver---cannot do complete particle production for mt= 22
                        only mf4/mf5 provided
   ```

6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

   ```
      ---message from conver---cannot do complete particle production for mt= 28
                        only mf4/mf5 provided
   ```

7. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

   ```
      ---message from conver---cannot do complete particle production for mt= 91
                        only mf4/mf5 provided
   ```